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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,771	04/09/2004	Thomas F. Seiler	60,680-793	1458

7590 08/25/2006

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EXAMINER

WALBERG, TERESA J

ART UNIT PAPER NUMBER

3753

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/821,771	Applicant(s) SEILER ET AL.	
	Examiner Teresa J. Walberg	Art Unit 3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18, 21-23, 27, 30 and 32 is/are rejected.
- 7) ☒ Claim(s) 17, 19, 20, 24-26 and 31 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/1/04, 4/21/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>IDS of 5/25/05, 9/7/05</u> |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8-10, 21-23, and 27-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Chadburn (2,981,520).

Chadburn discloses a heat exchanger (Figs. 1-3) as claimed including a core member (11) defining at least two flow passages (Figs. 1 and 2), a first plate member (20) sealing the flow passage ends at one end of the core member, a second plate member (21 in Fig. 5) secured to the first side of the core member and defining with the first side a flow path between the flow openings, wherein a fluid flowing through one of the flow passages is circulated to the other flow passage through the flow openings and the flow path (see Figs. 1, 3, and 5), the first and second plate members being integrally connected together (Fig. 5), the second plate extending partially over the first side a predetermined distance from one end of the first member (Fig. 3), the flow openings being located near the one end of the core member (Fig. 3), the second plate member including a substantially planar portion secured to the first side (Fig. 5), with a cross over recess defined by an outwardly projecting area (at 21) formed in the planar portion defining the flow path, the core including at least three flow passages (Fig. 2), a further plate member sealing at least some of the flow

passage ends at the other end of the core member (Fig. 3), the core member being extruded (col. 2, lines 16-17) and including integral tubular walls (Fig. 2).

3. Claim 32 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee (WO 94/23449).

Lee discloses a core plate (25) for a heat exchanger (see abstract), the core plate defining a plurality of outwardly extending longitudinal fins (12, 26) running from a first end to a second end of the core plate (Fig. 13), the fins having outer fin ends divided into separate sections (Fig. 13) with the outer fin ends of adjacent sections being bent in different directions (Fig. 13).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 11, 12, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chadburn (2,981,520) in view of Wu et al (2003/0164233).

Chadburn discloses a heat exchanger having the claimed structure with the exception of a plurality of spaced apart fins extending outward from the second side. Wu et al disclose a heat exchanger (see abstract) including a plurality of spaced apart fins (44) extending outward from a second side (38) of the heat exchanger. It would have been obvious in view of Wu et al to provide a

heat exchanger of Chadburn with a plurality of spaced apart fins extending outward from the second side, the motivation being to increase the heat transfer rate by increasing the surface area.

6. Claims 7 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chadburn (2,981,520) in view of Wu et al (2003/0164233) as applied to claims 6, 11, 12, and 16 above and further in view of Lee (WO 94/23449)

Chadburn in view of Wu et al disclose a heat exchanger having the claimed structure with the exception of the outer ends of the fins in successive fin sections being angled in alternating directions. Lee discloses a heat exchanger (see abstract) in which outer ends of the fins in successive fin sections are angled in alternating directions (Fig. 13).

It would have been obvious in view of Lee to provide a heat exchanger of Chadburn in view of Wu et al with outer ends of the fins in successive fin sections being angled in alternating directions, the motivation being to increase the heat transfer rate by increasing the surface area.

7. Claims 6, 7, 11-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chadburn (2,981,520) in view of Gutgesell (DE 298 03 166)

Chadburn disclosed a heat exchanger having the claimed structure with the exception of spaced apart fins extending outward from the second side and the outer ends of the fins in successive fin sections being angled in alternating

directions. Gutgesell discloses a heat exchanger (Fig. 1) including spaced apart fins (14) extending outward from the second side (Fig. 5) in which outer ends of the fins in successive fin sections are angled in alternating directions (Fig. 13).

It would have been obvious in view of Gutgesell to provide a heat exchanger of Chadburn with spaced apart fins extending outward from the second side and outer ends of the fins in successive fin sections being angled in alternating directions, the motivation being to increase the heat transfer rate by increasing the surface area.

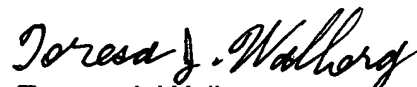
8. Claims 17, 19, 20, 24-26, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moser, Gruner, and Jurisich are cited to show heat exchanger structure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa J. Walberg whose telephone number is 571-272-4790. The examiner can normally be reached on M-F 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on 571-272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Teresa J. Walberg
Primary Examiner
Art Unit 3753

tjw